MAP4K2 Protein, Human (sf9, His-GST)

Cat. No.:	HY-P76946
Synonyms:	Mitogen-activated protein kinase kinase kinase kinase 2; GC kinase; MEKKK 2; GCK; RAB8IP
Species:	Human
Source:	Sf9 insect cells
Accession:	Q12851-2 (M1-Y812)
Gene ID:	5871
Molecular Weight:	Approximately 116 kDa

PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Solution.
Formulation	Supplied as a 0.2 μm filtered solution of 50 mM Tris, 100 mM NaCl, pH 8.0
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	MAP4K2, a serine/threonine-protein kinase, serves as an integral component in the MAP kinase signal transduction pathway, functioning as a MAPK kinase kinase kinase (MAP4K). It acts as a crucial upstream activator primarily for the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) signaling pathway, and to a lesser extent, for the p38 MAPKs signaling pathway. MAP4K2 is essential for the efficient activation of JNKs in response to TRAF6-dependent stimuli, including various pathogen-associated molecular patterns (PAMPs) such as polyinosine-polycytidine (poly(IC)), lipopolysaccharides (LPS), lipid A, peptidoglycan (PGN), and bacterial flagellin. Additionally, it contributes to JNKs activation in response to IL-1 and engagement of CD40. Notably, MAP4K2 plays a prominent role in LPS signaling, impacting c-Jun phosphorylation and IL-8 induction. Furthermore, it enhances the oligomerization of MAP3K1, potentially relieving N-terminal mediated MAP3K1 autoinhibition and facilitating activation through autophosphorylation. MAP4K2 also mediates the SAP/JNK signaling pathway and the p38 MAPKs signaling pathway by activating the MAP3Ks MAP3K10/MLK2 and MAP3K11/MLK3. Its involvement may extend to the regulation of vesicle targeting or fusion.

Caution: Product has not been fully validated for medical applications. For research use only.

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